The State of New Hampshire
Department of Environmental Services

Michael P. Nolin
Commissioner

April 18, 2006

CERTIFIED MAIL
#7000 1670 0001 2907 7166
RETURN RECEIPT REQUESTED

LETTER OF DEFICIENCY
No. WMD 06-009

Phillips Exeter Academy
20 Main Street
Exeter, NH 03833-2460

Attn: Roger F. Wakeman, P.E., Director of Facilities Management

Re: Phillips Exeter Academy
Exeter, New Hampshire
EPA ID No. NHD982716169

Dear Mr. Wakeman:

On January 6, 2006, the Department of Environmental Services, Waste Management Division ("DES") conducted an inspection of Phillips Exeter Academy ("PEA"). The purpose of the inspection was to determine PEA's compliance status relative to RSA Ch. 147-A and the New Hampshire Hazardous Waste Rules, Env-Wm 100-1100.

As a result of the inspection and review of the information provided to DES, the following deficiencies were documented:

1. RSA 147-A:4/Env-Wm 353.04 – Limited Permit

At the time of the inspection, PEA was operating an elementary neutralization unit ("ENU") without a Limited Permit. Hazardous waste acidic and basic solutions generated from science class laboratory experiments are neutralized in 1-gallon satellite storage containers located in the science laboratory hoods. The neutralized wastewater is discharged to the Exeter Municipal Wastewater Treatment Plant ("POTW").

The ENU meets the definition of a hazardous waste treatment facility within RSA 147-A:2, IV because it is used to treat a hazardous waste as defined in Env-Wm 400 (*i.e.*, corrosive). DES has no record of receiving a Limited Permit application form from PEA for the ENU.

RSA 147-A:4, I requires any person who wishes to operate a hazardous waste treatment facility to first obtain a Limited Permit provided the operator meets the conditions specified in Env-Wm 353.04(b) through (o), including submission of a Limited Permit application form. Initial applications are subject to a $500 fee, as referenced by Env-Wm 353.07(d).

If PEA wishes to continue to neutralize a corrosive hazardous waste in containers, then DES requests that PEA obtain a Limited Permit by complying with the requirements of Env-Wm 353.04, which include submitting the enclosed New Hampshire Limited Permit application form to DES.

2. Env-Wm 502.01 – Hazardous Waste Determination

At the time of the inspection, PEA did not have an adequate hazardous waste determination conducted on the "Toxic Ionic Compounds" and the "Non-Aqueous, Non-Halogenated, Non-Aromatic Organic Compounds." While these waste streams are being disposed of as hazardous wastes, DES could not determine based on the waste profiles received from PEA that these waste streams have been properly characterized and the correct waste codes are being used on the hazardous waste manifests.

At the time of the inspection, PEA also did not have a formal hazardous waste determination conducted on the "Water Soluble, Non-Aromatic, Non-Halogenated Hydrocarbon Waste" (*e.g.,* Methanol, Ethanol, Propanol, Isopropanol, Butanol, and Acetone). The "Water Soluble, Non-Aromatic, Non-Halogenated Hydrocarbon Waste" was being disposed of down the laboratory sinks.

Env-Wm 502.01 requires a generator of a waste to determine if their waste is a hazardous waste. Waste determined to be hazardous must be handled pursuant to the requirements of the Hazardous Waste Rules.

DES requests that PEA conduct hazardous waste determinations for the following waste streams:

A. "Toxic Ionic Compounds" generated from science laboratory experiments. PEA previously used "generator knowledge" of the hazardous constituents or characteristics of the waste, based on the materials or processes used to generate the waste, to determine that this waste stream is hazardous waste. PEA will need to submit the waste profile or the PEA Waste Identification Form for this waste. An example of the PEA Waste Identification Form was attached to the PEA "Hazardous Waste Training Program" that was provided to DES at the time of the inspection.

Alternatively PEA may analyze a representative sample of the waste stream. Laboratory analysis will need to include, at a minimum, testing to detect the characteristic of toxicity (TCLP metals and organics) using the methods described in Env-Wm 403.06. PEA will need to provide the results of the hazardous waste determination, along with any other supporting data, such as chemical analyses, to DES.

B. "Non-Aqueous, Non-Halogenated, Non-Aromatic Organic Compounds" generated from science laboratory experiments. PEA previously used "generator knowledge" of the hazardous constituents or characteristics of the waste, based on the materials or processes used to generate the waste, to determine that this waste stream is hazardous waste. PEA will need to submit the waste profile or the PEA

Waste Identification Form for this waste. An example of the PEA Waste Identification Form was attached to the PEA "Hazardous Waste Training Program" that was provided to DES at the time of the inspection.

Alternatively PEA may analyze a representative sample of the waste stream. Laboratory analysis will need to include, at a minimum, testing to detect the characteristic of toxicity (TCLP metals, and organics) using the methods described in Env-Wm 403.06. PEA will need to provide the results of the hazardous waste determination, along with any other supporting data, such as chemical analyses, to DES.

C. "Water Soluble, Non-Aromatic, Non-Halogenated Hydrocarbon Waste" generated from science laboratory experiments. PEA will need to determine whether the "Water Soluble, Non-Aromatic, Non-Halogenated Hydrocarbon Waste" is a hazardous waste by either applying knowledge of the hazardous properties of the "Water Soluble, Non-Aromatic, Non-Halogenated Hydrocarbon Waste" or by testing a representative samples of the "Water Soluble, Non-Aromatic, Non-Halogenated Hydrocarbon Waste."

Laboratory analysis will need to include, at a minimum, testing to detect the characteristic of toxicity (TCLP metals, and organics) using the methods described in Env-Wm 403.06 and testing to detect the characteristic of ignitability using the methods described in Env-Wm 403.03.

PEA will need to provide to DES the results of the hazardous waste determination, along with any other supporting data, such as Material Safety Data Sheets (MSDS) and the chemical analyses or the PEA Waste Identification Form. An example of the PEA Waste Identification Form was attached to the PEA "Hazardous Waste Training Program" that was provided to DES at the time of the inspection.

In addition, DES requests that PEA provide the following information regarding the "Water Soluble, Non-Aromatic, Non-Halogenated Hydrocarbon Waste" if it is determined that "Water Soluble, Non-Aromatic, Non-Halogenated Hydrocarbon Waste" is a hazardous waste:

(i) A written estimate of how long (*i.e.*, years and months) PEA has been disposing of the "Water Soluble, Non-Aromatic, Non-Halogenated Hydrocarbon Waste" down the laboratory sinks.

(ii) A written estimate of the quantity of "Water Soluble, Non-Aromatic, Non-Halogenated Hydrocarbon Waste" disposed of during the 5-year time period prior to the inspection.

(iii) An economic benefit analysis. In this case the economic benefit derived by PEA would be the cost of disposal had the "Water Soluble, Non-Aromatic, Non-Halogenated Hydrocarbon Waste" been properly characterized and disposed of as a hazardous waste.

3. Env-Wm 507.01(a)(3) and Env-Wm 509.03(d) – Storage Requirements – Open Container

At the time of the inspection, one (1) hazardous waste satellite container located in the Chemistry Lab Room 216 was not closed. See the attached Container Inventory ("Inventory").

Env-Wm 507.01(a)(3) requires generators to ensure that containers storing hazardous waste be closed at all times, except when waste is being added to or removed from the containers.

DES requested that PEA ensure that containers storing hazardous waste remain closed at all times, except when adding waste to or removing waste from the containers.

During the January 6, 2006 DES inspection, Keith Ronalter corrected the above-referenced deficiency by closing the hazardous waste satellite container. No further action is required.

4. Env-Wm 507.01(c) - Hazardous Waste Storage

At the time of the inspection, thirty-two (32) 1-gallon hazardous waste satellite containers were being stored in laboratory hoods and on countertops with functional sinks with no provisions for secondary containment.

Env-Wm 507.01(c) requires generators to provide secondary containment capable of containing the volume of the largest capacity hazardous waste container present when a sink with a functional drain is located within the storage area.

DES requested that PEA provide secondary containment for hazardous waste satellite containers stored in laboratory hoods and on countertops with functional sinks.

In a submittal dated January 20, 2006, Keith Ronalter provided information that secondary containment has been supplied. No further action is required.

5. Env-Wm 507.03(a)(1)a. – Container Marking

At the time of the inspection, one (1) 55-gallon container of D001 waste paint, two (2) 5-gallon containers of "Rustoleum", three (3) 1-gallon containers of "Stop Skid", and one (1) 25-gallon container of "Oil Finish Water Seal", stored in the "Grounds Area" Main Hazardous Waste Storage Area, were not marked with the beginning accumulation date. See attached Inventory.

Env-Wm 507.03(a)(1)a. requires that all containers used for the storage of hazardous waste be marked with the beginning accumulation date at the time they are first used to store hazardous wastes.

DES requests that PEA properly mark all containers of hazardous waste with the beginning accumulation date at the time they are first used to store waste.

In a submittal dated January 20, 2006 from PEA, Keith Ronalter provided information that the one (1) 55-gallon container of D001 waste paint is now marked with the beginning accumulation date.

PEA will need to mark the beginning accumulation date on the two (2) 5-gallon containers of "Rustoleum", three (3) 1-gallon containers of "Stop Skid", and the one (1) 25-gallon container of "Oil Finish Water Seal", stored in the "Grounds Area" Main Hazardous Waste Storage Area.

6. Env-Wm 507.03(a)(1) b., and d. - Container Marking

At the time of the inspection, the two (2) 5-gallon containers of "Rustoleum", the three (3) 1-gallon containers of "Stop Skid", and the one (1) 25-gallon container of "Oil Finish Water Seal" located in the "Grounds Area" Main Hazardous Waste Storage were not marked with the words "hazardous waste," and the EPA or state waste number. See the attached Inventory.

Env-Wm 507.03(a)(1)b., c., and d. require that all containers used for the storage of hazardous waste be marked with the following information at the time they are first used to store wastes: the words "hazardous waste," words that identify the contents of the container, and the EPA or state waste number.

DES requests that PEA properly mark all containers of hazardous waste at the time they are first used to store waste with: the words "hazardous waste," words that identify the contents of the container, and the EPA or state waste number.

7. Env-Wm 509.02(a)(1) - Inspection Requirements

A review of PEA's Hazardous Waste Inspection Checklist ("Checklist") revealed at the time of the inspection, PEA had not documented 4 out of the required 52 weekly inspections of the "Grounds Area" and the "Phelps Science Building" Main Hazardous Waste Storage Areas, during the 1 year period immediately prior to the inspection. A review of PEA's Checklist also revealed that the Checklist did not include a notation for the time of the inspection.

Env-Wm 509.02(a)(1), which references 40 CFR 265.15, General Inspection Requirements, requires full quantity generators to conduct and document inspections of the facility, including the hazardous waste storage area(s). Per 40 CFR 265.15(d), the inspection records must include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions taken. 40 CFR Subpart I, Use and Management of Containers, further stipulates that containers must be inspected at least weekly.

DES requested that PEA amend the existing Checklist to reflect the time of the inspection. Also, ensure that weekly inspections of each hazardous waste storage area are routinely recorded in the updated Checklist.

In a submittal dated January 20, 2006, Keith Ronalter provided documentation substantiating that the facility's Hazardous Waste Inspection Log has been amended to include the time of the inspection. No further action is required.

8. Env-Wm 509.02(a)(2) – Personnel Training

A review of PEA's personnel training program revealed the following deficiencies:

A. The Emergency Coordinators/Hazardous Waste Coordinators identified below have not taken part in annual hazardous waste training reviews for the years noted:

1. Pat Barnaby - 2005;
2. Kathleen Curwen - 2002, 2004, 2005;
3. Roger Wakeman - 2001, 2002, 2003, 2004, 2005;
4. Bob Kief - 2001, 2002, 2003, 2004, 2005;
5. John Carbonneau - 2001, 2002, 2003, 2004, 2005; and
6. George Bragg - 2001, 2002, 2003, 2004 and 2005.

B. Hazardous Waste Handlers, including Gerald Hill, John Magyar, and Richard Sylvester, had not taken part in annual hazardous waste training reviews in the years 2003, 2004, and 2005. Anthony Antosiewicz had not taken part in annual hazardous waste training reviews in the years 2002, 2003, 2004, and 2005.

C. PEA's training records failed to document the job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job.

Env-Wm 509.02(a)(2), which references 40 CFR 265.16, Personnel Training, requires full quantity generators to maintain a personnel training program. This includes, but is not limited to, ensuring that reviews are conducted for personnel handling hazardous waste. Env-Wm 509.02(a)(2) also requires full quantity generators to maintain at the facility, specific documents and records related to personnel training.

DES requests that PEA ensure all employees who have hazardous waste responsibilities receive annual reviews. DES also requests that PEA develop and submit to DES a written personnel training program which provides the job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job.

In a submittal dated January 20, 2006, Keith Ronalter provided an updated training plan. Based upon a review of your training plan DES offers the following comments. The safety/security personnel listed in the Training Plan have hazardous waste duties and in the Contingency Plan security/safety personnel are listed as contacts for hazardous waste /chemical spills. These safety/security personnel are required to have annual hazardous waste training. Kathleen Curwen is also listed on the emergency call list for chemical spills and is required to have annual hazardous waste training. In the Training Plan, Bill

Thompson is required to have annual training based on the job description as a hazardous waste handler.

In a submittal dated February 17, 2006, Keith Ronalter provided information that Roger Wakeman, George Bragg and Kathleen Curwen are no longer listed as Emergency Coordinators.

PEA will need to submit documentation that personnel required to have hazardous waste training have been trained. PEA should submit an updated training plan that accurately lists those personnel performing hazardous waste duties and the required training.

9. Env-Wm 509.02(a)(5) – Contingency Plan

At the time of inspection, DES confirmed that PEA did not have a facility contingency plan.

Env-Wm 509.02(a)(5), which references 40 CFR 265, Subpart D, requires full quantity generators to maintain a complete contingency plan at the site.

DES requests that PEA develop a contingency plan that includes the items identified in the enclosed Contingency Plan Module. Submit the completed Contingency Plan to DES, and provide documentation (*e.g.*, return receipts, copies of individual letters of transmittal) that the Contingency Plan has also been submitted to state and local emergency response teams.

In a submittal dated January 20, 2006, Keith Ronalter provided a copy of PEA's contingency plan. A review of PEA's contingency plan revealed deficiencies regarding the following:

(a) The date of the contingency plan;

(b) A brief outline of equipment capability;

(c) A description of the signal(s) used to begin an evacuation;

(d) A description of primary and alternate evacuation routes;

(e) A description of the arrangements made with local authorities;

(f) The methods for monitoring facility equipment if there is a work stoppage;

(g) Instructions to ensure that a waste which is incompatible with the released material is not treated, stored or disposed of until cleanup procedures are completed; and

(h) The facility contingency plan did not list specific elements to be included in a 15-day report, listed in 40 CFR 265.56(j) that address details of the incident.

10. Env-Wm 509.02(b) – Emergency Posting

At the time of the inspection, the emergency posting at the nearest telephones to the "Grounds Area" and the "Phelps Science Building" Main Hazardous Waste Storage Areas were present but incomplete. The emergency posting failed to document the Primary Emergency Coordinator, the DES telephone number, emergency equipment, and home numbers of Emergency Coordinators.

Env-Wm 509.02(b) requires that full quantity generators post a list of the steps to take if an emergency occurs and the following emergency numbers at the nearest telephone to the hazardous waste storage area:

(a) The emergency coordinators (home and office);

(b) The fire department, police department, and State of New Hampshire and local emergency response teams that may be called upon to provide emergency services, unless the facility has a 24-hour response team designated to provide emergency services whose number is posted; and

(c) The location of fire extinguishers and spill control material, and if present, fire and internal emergency alarms.

DES requests that PEA post the required information at the nearest telephone to the hazardous waste storage area.

In a submittal dated January 20, 2006, Keith Ronalter provided information that the emergency postings had been updated. PEA will need to submit a copy of the updated emergency postings.

11. Env-Wm 509.03 (g) – Satellite Storage Container Marking

At the time of the inspection, one (1) 1-gallon container located in Room 305 Laboratory Hood was not marked with the words that identify the contents of the container. See the attached Inventory.

Env-Wm 509.03(g) requires that all containers used for the storage of hazardous waste be marked with the words that identify the contents of the container.

DES requested that PEA properly mark all satellite containers of hazardous waste at the time they are first used to store waste with the words that identify the contents of the container.

In a submittal dated January 20, 2006, Keith Ronalter provided information that the one (1) 1-gallon container located in Room 305 had been marked with words that identify the contents of the container. No further action is required.

12. Env-Wm 512.01(a)(1) – Recordkeeping – Manifest Copies

At the time of the inspection, PEA did not have on file one (1) original generator copy and one (1) hazardous waste manifest certified by the designated facility, including:

i. Manifest No. MAQ963358, dated December 13, 2004 (generator copy), and

ii. Manifest No. MAQ404089, dated November 10, 2003 (facility copy).

Env-Wm 512.01(a)(1) requires that the generator keep all manifest copies, including the original generator copy and the copy certified by the designated facility, for three (3) years from the date of signature by the generator.

DES requests that PEA obtain copies of the two (2) hazardous waste manifests listed above, and properly retain these copies and copies of future shipments of hazardous waste.

13. Env-Wm 807.06(b)(4) - Standards for Generators of Used Oil Being Recycled

At the time of the inspection, one (1) 5-gallon container located in the Maintenance Garage, managed as used oil for recycle, was not labeled with the words "Used Oil for Recycle."

Env-Wm 807.06(b)(4) requires that generators of used oil destined for recycling label their containers and tanks with the words "Used Oil for Recycle" at all times during accumulation and storage.

DES requested that PEA label all containers and tanks of used oil destined for recycling with the words "Used Oil for Recycle" at all times during accumulation and storage.

In a submittal dated January 20, 2006, Keith Ronalter provided information that a new oil drain canister had been purchased and labeled. No further action is required.

14. Env-Wm 807.06(b)(5) – Standards for Generators of Used Oil Being Recycled

At the time of the inspection, one (1) 5-gallon container of used oil located in the Maintenance Garage, destined for recycling, was not closed.

Env-Wm 807.06(b)(5) requires that used oil be placed in containers or tanks that remain closed at all times, except to add or remove wastes.

DES requested that PEA keep all containers and tanks closed at all times except to add or remove used oil. Safety funnels that thread into the bung and have closeable lids that seal are acceptable for this purpose.

In a submittal dated January 20, 2006, Keith Ronalter provided information that a new oil drain canister had been purchased. No further action is required.

15. Env-Wm 1102.03(c)(1) – Universal Waste Lamp Management

At the time of the inspection, five (5) containers of universal waste lamps were not closed. See the attached Inventory.

Env-Wm 1102.03(c)(1) requires universal waste containers to be closed, except when universal waste is being added to or removed from the container.

DES requested that PEA ensure that all containers of universal waste lamps are closed, except when universal waste is being added to or removed from the container.

At the time of the inspection, Keith Ronalter closed the five (5) containers of universal waste lamps. No further action is required.

DES believes the remaining portion of the cited deficiencies can be corrected and a report describing the corrective measures taken by PEA can be submitted within thirty (30) days of receipt of this letter. Supporting documentation that describes the measures taken to achieve compliance should be included with the report.

In the event compliance is not achieved within this period, DES may take further action against PEA including issuing an order requiring that the deficiencies be corrected, initiating an administrative fine proceeding, and/or referring the matter to the New Hampshire Department of Justice for imposition of civil penalties. In addition, DES personnel may re-inspect your facility at a later date to determine whether the facility has come into, and is maintaining, full compliance with the applicable rules. Fines may be pursued for any or all violations observed during this or subsequent inspections of the facility.

The written report as requested above should be addressed as follows:

Linda Birmingham, Waste Management Specialist
DES/WMD
P.O. Box 95
Concord, NH 03302-0095

Enclosed you will find a copy of the completed Hazardous Waste Generator Inspection Report which documents the compliance status of your facility at the time of the inspection. This report may also be of value to you for use in determining future compliance with the New Hampshire Hazardous Waste Rules.

The State of New Hampshire Hazardous Waste Rules, as well as much other useful information, can be obtained from DES's website at http://www.des.state.nh.us/hwcs/, or by contacting the Public Information Center at (603) 271-2975.

It is the goal of DES to promote the prevention of pollution at the source as the preferred option for meeting established environmental quality goals. We strive to ensure that pollution prevention options are considered first, followed by recycling, treatment and disposal. I am requesting that the DES's Pollution Prevention Coordinator, Stephanie D'Agostino, contact you to discuss possibilities

for waste minimization or source reduction at your facility. In the meantime, if you have immediate questions about pollution prevention, please feel free to contact her at 271-6398.

As a service to New Hampshire's hazardous waste generators, we maintain a Hazardous Waste Assistance Hotline which is available for you to contact our knowledgeable staff of hazardous waste inspectors. Our hazardous waste staff is available to answer your questions concerning the New Hampshire Hazardous Waste Rules and the compliance issues which affect your hazardous waste management program. The technical assistance available through the Hotline includes fact sheets that pertain to the management and recycling of specific wastes, summary sheets of specific sections of the Hazardous Waste Rules, copies of EPA and New Hampshire hazardous waste policy or regulatory interpretation letters that may benefit your operation, and networks with other state or federal agencies to answer your questions on a national level. The Hotline is available Monday through Friday, 8:00 AM to 4:00 PM at (1-866) HAZ-WAST (in-state only) or (603) 271-2942.

Should you have any questions regarding this letter, please contact the lead inspector, Linda Birmingham, or Tod Leedberg, RCRA Compliance Supervisor at 271-2942. Thank you for your cooperation.

Sincerely,

COPY

John J. Duclos, Administrator
Hazardous Waste Compliance Bureau
Waste Management Division

cc: DB/RCRA/LOD/Archives
Anthony P. Giunta, P.G., Director, WMD/ Paul L. Heirtzler, P.E., Esq., Administrator, WMD
Gretchen Hamel, Administrator, DES Legal Unit
Keith Ronalter, EHS Manager
Tyler Tingley, Principal, PEA

ec: Stephanie D'Agostino, DES Pollution Prevention Coordinator

Enclosure: Limited Permit Application